

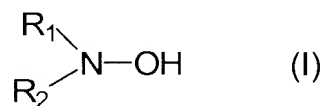
This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): A polymerization-inhibiting composition comprising at least one compound (a) selected from the group consisting of a compound having an NO radical in its molecule and a precursor compound capable of forming an NO radical, a phosphorus-containing compound (b), and a conjugated diene-containing hydrocarbon mixture selected from the group consisting of an isoprene-containing C₅ hydrocarbon fraction and a 1,3-butadiene-containing C₄ hydrocarbon fraction, wherein a weight ratio of the compound (a) to the phosphorus-containing compound (b) is 1:10 to 100:1.

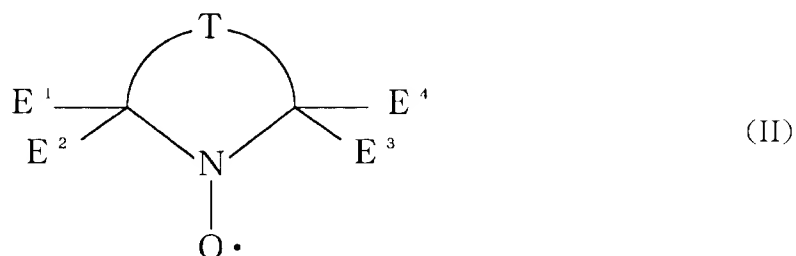
Claim 2 (Original): The polymerization-inhibiting composition according to Claim 1, wherein the compound (a) is at least one compound selected from the group consisting of an N,N-dialkylhydroxylamine, a sterically hindered nitroxyl compound and a sterically hindered hydroxylamine compound.

Claim 3 (Original): The polymerization-inhibiting composition according to Claim 2, wherein the N,N-dialkylhydroxylamine is a compound represented by the formula (I):

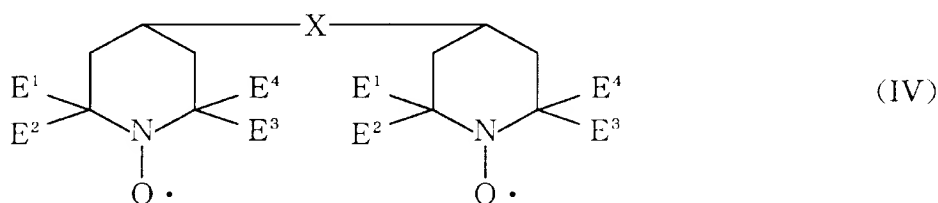


wherein R₁ and R₂ are independently a linear, branched or cyclic alkyl group having 1 to 10 carbon atoms.

Claim 4 (Original): The polymerization-inhibiting composition according to Claim 2, wherein the sterically hindered nitroxyl compound is a compound represented by the formula (II):

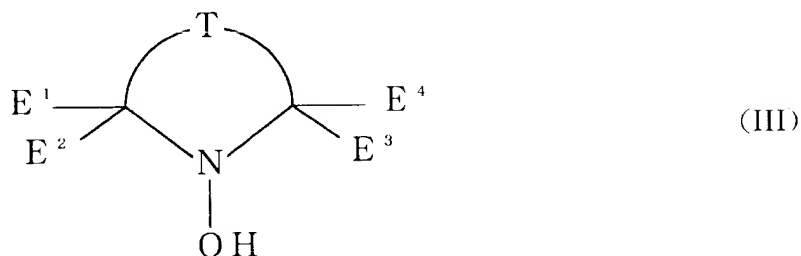


wherein the nitrogen atom is bonded directly to 2 tetrasubstituted carbon atoms, E₁, E₂, E₃ and E₄ are independently an organic group, and T is an organic group required to form a 5- or 6-membered ring, or a compound represented by the formula (IV):

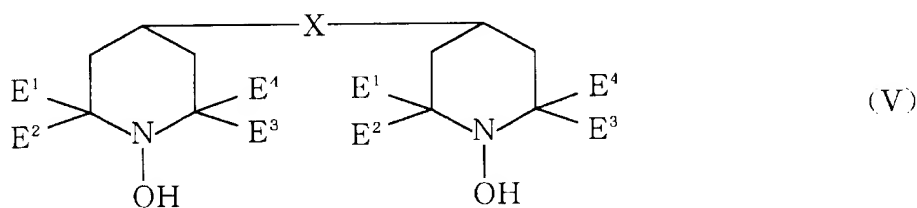


wherein the nitrogen atom is bonded directly to 2 tetrasubstituted carbon atoms, E₁, E₂, E₃ and E₄ are independently an organic group, and X is a divalent linking group.

Claim 5 (Original): The polymerization-inhibiting composition according to Claim 2, wherein the sterically hindered hydroxylamine compound is a compound represented by the formula (III):



wherein the nitrogen atom is bonded directly to 2 tetrasubstituted carbon atoms, E₁, E₂, E₃ and E₄ are independently an organic group, and T is an organic group required to form a 5- or 6-membered ring, or a compound represented by the formula (V):



wherein the nitrogen atom is bonded directly to 2 tetrasubstituted carbon atoms, E₁, E₂, E₃ and E₄ are independently an organic group, and X is a divalent linking group.

Claim 6 (Original): The polymerization-inhibiting composition according to Claim 1, wherein the phosphorus-containing compound (b) is at least one selected from the group consisting of phosphoric compounds, esterified products of the phosphoric compounds, alkali metal salts or ammonium salts of the phosphoric compounds, compounds obtained by introducing an ester linkage and an alkali metal salt linkage or an ammonium salt linkage into the phosphoric compounds, phosphine compounds, and hexaalkylphosphorus triamides.

Claim 7-14 (Cancelled).

Claim 15 (Presently Amended): A method for inhibiting polymerization, which comprises causing at least one compound (a) selected from the group consisting of a

compound having an NO radical in its molecule and a precursor compound capable of forming an NO radical, and a phosphorus-containing compound (b) to coexist at a weight ratio of the compound (a) to the phosphorus-containing compound (b) of 1:10 to 100:1 with a conjugated diene-containing hydrocarbon mixture selected from the group consisting of an isoprene-containing C₅ hydrocarbon fraction and a 1,3-butadiene-containing C₄ hydrocarbon fraction.

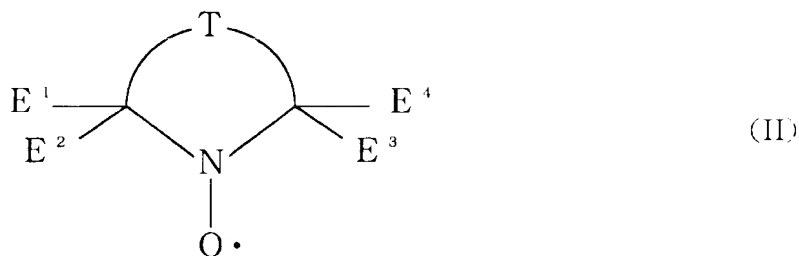
Claim 16 (Original): The polymerization-inhibiting method according to Claim 15, wherein the compound (a) is at least one compound selected from the group consisting of an N,N- dialkylhydroxylamine, a sterically hindered nitroxyl compound and a sterically hindered hydroxylamine compound.

Claim 17 (Original): The polymerization-inhibiting method according to Claim 16, wherein the N,N-dialkylhydroxylamine is a compound represented by the formula (I):

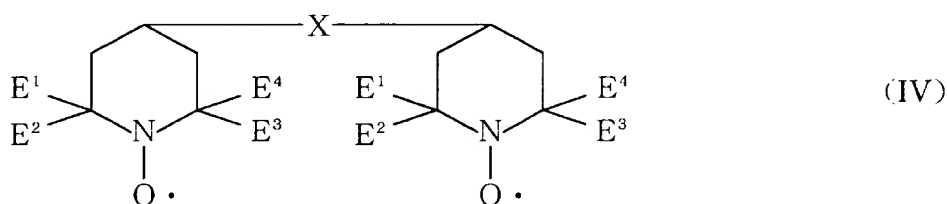


wherein R₁ and R₂ are independently a linear, branched or cyclic alkyl group having 1 to 10 carbon atoms.

Claim 18 (Original): The polymerization-inhibiting method according to Claim 16, wherein the sterically hindered nitroxyl compound is a compound represented by the formula (II):

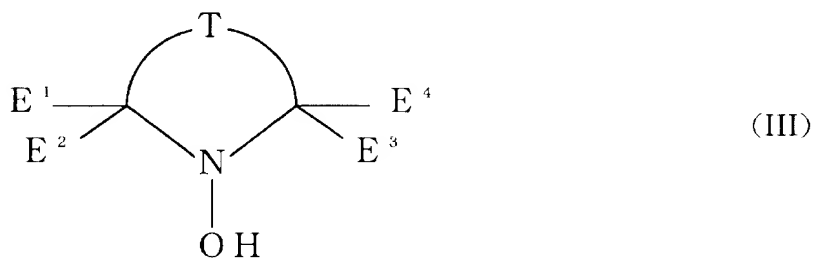


wherein the nitrogen atom is bonded directly to 2 tetrasubstituted carbon atoms, E₁, E₂, E₃ and E₄ are independently an organic group, and T is an organic group required to form a 5- or 6-membered ring, or a compound represented by the formula (IV):

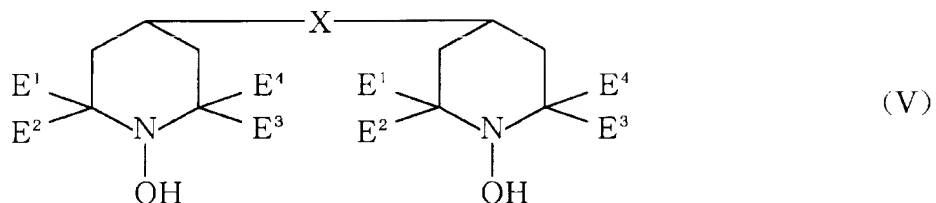


wherein the nitrogen atom is bonded directly to 2 tetrasubstituted carbon atoms, E₁, E₂, E₃ and E₄ are independently an organic group, and X is a divalent linking group.

Claim 19 (Original): The polymerization-inhibiting method according to Claim 16, wherein the sterically hindered hydroxylamine compound is a compound represented by the formula (III):



wherein the nitrogen atom is bonded directly to 2 tetrasubstituted carbon atoms, E₁, E₂, E₃ and E₄ are independently an organic group, and T is an organic group required to form a 5- or 6-membered ring, or a compound represented by the formula (V):



wherein the nitrogen atom is bonded directly to 2 tetrasubstituted carbon atoms, E₁, E₂, E₃ and E₄ are independently an organic group, and X is a divalent linking group.

Claim 20 (Original): The polymerization-inhibiting method according to Claim 15, wherein the phosphorus-containing compound (b) is at least one selected from the group consisting of phosphoric compounds, esterified products of the phosphoric compounds, alkali metal salts or ammonium salts of the phosphoric compounds, compounds obtained by introducing an ester linkage and an alkali metal salt linkage or an ammonium salt linkage into the phosphoric compounds, phosphine compounds, and hexaalkylphosphorus triamides.

Claim 21 (Cancelled).

Claim 22 (Currently Amended): The polymerization-inhibiting method according to Claim 15, wherein the compound (a) and the phosphorus- containing compound (b) are caused to coexist with ~~an~~ a conjugated diene in a preparation process of a purified conjugated diene, comprising isolating the conjugated diene by conducting a distillation process including extractive distillation from a conjugated diene-containing hydrocarbon mixture.

Claims 23-25 (Cancelled).

Claim 26 (New): The polymerization-inhibiting method according to Claim 16, wherein the phosphorus-containing compound (b) is at least one selected from the group

consisting of phosphoric compounds, esterified products of the phosphoric compounds, alkali metal salts or ammonium salts of the phosphoric compounds, compounds obtained by introducing an ester linkage and an alkali metal salt linkage or an ammonium salt linkage into the phosphoric compounds, and hexaalkylphosphorus triamides.

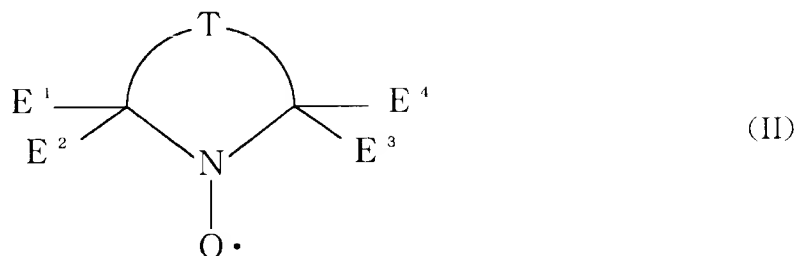
Claim 27 (New): The polymerization-inhibiting method according to Claim 26, wherein the compound (a) is at least one compound selected from the group consisting of an N,N-dialkylhydroxylamine, a sterically hindered nitroxyl compound and a sterically hindered hydroxylamine compound.

Claim 28 (New): The polymerization-inhibiting method according to Claim 27, wherein the N,N-dialkylhydroxylamine is a compound represented by the formula (I):

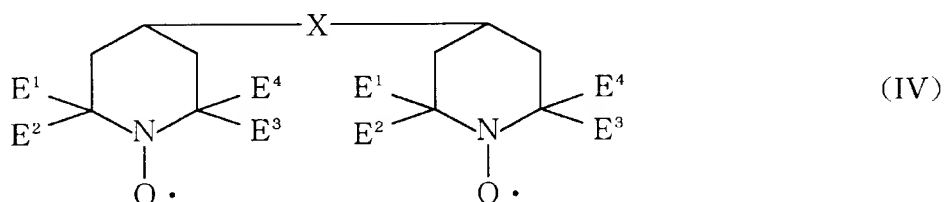


wherein R_1 and R_2 are independently a linear, branched or cyclic alkyl group having 1 to 10 carbon atoms.

Claim 29 (New): The polymerization-inhibiting method according to Claim 27, wherein the sterically hindered nitroxyl compound is a compound represented by the formula (II):

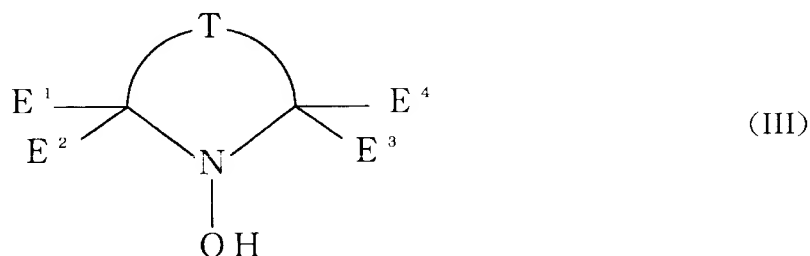


wherein the nitrogen atom is bonded directly to 2 tetrasubstituted carbon atoms, E₁, E₂, E₃ and E₄ are independently an organic group, and T is an organic group required to form a 5- or 6-membered ring, or a compound represented by the formula (IV):

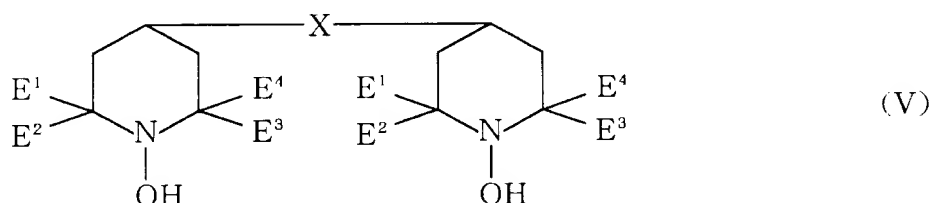


wherein the nitrogen atom is bonded directly to 2 tetrasubstituted carbon atoms, E₁, E₂, E₃ and E₄ are independently an organic group, and X is a divalent linking group.

Claim 30 (New): The polymerization-inhibiting method according to Claim 27, wherein the sterically hindered hydroxylamine compound is a compound represented by the formula (III):



wherein the nitrogen atom is bonded directly to 2 tetrasubstituted carbon atoms, E₁, E₂, E₃ and E₄ are independently an organic group, and T is an organic group required to form a 5- or 6-membered ring, or a compound represented by the formula (V):



wherein the nitrogen atom is bonded directly to 2 tetrasubstituted carbon atoms, E₁, E₂, E₃ and E₄ are independently an organic group, and X is a divalent linking group.

Claim 31 (New): The polymerization-inhibiting method according to Claim 15, wherein the compound (a) is an N,N-dialkylhydroxylamine.

Claim 32 (New): The polymerization-inhibiting method according to Claim 31, wherein the N,N-dialkylhydroxylamine is a compound represented by the formula (I):



wherein R₁ and R₂ are independently a linear, branched or cyclic alkyl group having 1 to 10 carbon atoms.

Claim 33 (New): The polymerization-inhibiting method according to Claim 32, wherein the phosphorus-containing compound (b) is at least one selected from the group consisting of phosphoric compounds, esterified products of the phosphoric compounds, alkali metal salts or ammonium salts of the phosphoric compounds, compounds obtained by

introducing an ester linkage and an alkali metal salt linkage or an ammonium salt linkage into the phosphoric compounds, phosphine compounds, and hexaalkylphosphorus triamides.